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EXAMINER
NGUYEN, THUKHANH T

ART UNIT PAPER NUMBER
1722

DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/481,451

Applicant(s)

FAHS ET AL.

Examiner

Thu Khanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 17-22 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1, 7, and 16. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by a Japanese reference (JP-59133).

The JP'133 reference teaches an apparatus for forming a sheet of dough comprising a screw pump (4) connected to an inlet (3) to pump material under pressure, a discharge manifold (1) having a hollow interior chamber formed at one side by the pump, a top (1), a bottom (12), two end faces (Fig. 2), and a roller (7) on the other side, wherein the manifold (1) receiving the material from the pump (4) and has a discharge opening (the gap between the roller 7 and the bottom member 12) at one side for discharging the material, a casting line (12 and 14) position downstream of the discharge manifold including an endless casting belt (14) for transporting and forming a continuous sheet of material. The apparatus further comprises drive mechanisms (the roller on top of the compartment 15, 10, and 5) to drive the conveyor belt (14), the roller (7) and the screw pump (4).

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the JP'133 reference as applied to claims 1,3, 17 and 20 above and further in view of Collins (4,815,370).

The Japanese reference discloses an apparatus and method for forming a dough web as described above. However, this reference fails to disclose the roller is made of steel and having a plastic sleeve.

Collins discloses a rice pressing apparatus in which a press roller can be made of steel having a rubber sleeve in order to smooth the web material surface and to be able to change the sleeve as it worn out without replacing the roller.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the Japanese reference with a roller made of steel with a plastic sleeve for the purpose of smoothing the web surface and being able to change the sleeve as it worn out without replacing the roller as taught by Collins. It is in the scope of an artisan to recognize that stainless steel is a better choice for making a mold or a press roller.

6. Claims 1 and 3-6, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of Swanson (4293,290) and the Japanese reference (59,133).

Driessen discloses an apparatus and method for casting cheese, comprising a removable discharge manifold (Fig. 4, 11, 12, col. 2, lines 1-2), wherein the manifold having a hollow interior chamber (Fig. 5) with many inlets (49) for receiving starting material (65), a discharge opening (15, open bottom of the

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chamber 12), an endless casting belt (61, 68, 72) mounted down stream to the manifold wherein the cheese sheet is cooled on the belt surface (col. 2, lines 23-26), a thickness control bar (18) is mounted at one side of the chamber (12) for controlling the thickness of the web material, a belt driven mechanism (71, 69) for revolving the belt. The manifold chamber includes a top, bottom, end, upstream and downstream face plates (11, 12), wherein the bottom face open to the casting belt, the downstream face open to the control bar, and the top face having inlets (Fig. 12); each inlets is attached to a corresponding adjustable valve (52), and wherein the control bar (18) is set a fixed distance from the casting belt (61) and a space is formed between a surface of the control bar (18) for determine the thickness of the web material. However, Driessen fails to disclose a pump and a roller.

Swanson discloses a rotary pump (10) for circulating viscous material product under high pressure, wherein the product material can be meat emulsion, chopped meat, bread dough, pizza dough, dough slurry, and processed cheese (col. 2, lines 43-51).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Driessen by providing a pump for transporting the cheese as taught by Swanson, because the pump facilitate cheese-transferring from the storage hopper to the processing site.

The Japanese reference discloses a method and apparatus for forming a dough web material, comprising an endless casting belt (14), a rotatable press roller (7) mounted to the downstream face of the manifold (1) and being driven by a shaft in the same direction as the belt for the purpose of facilitating the material onto the casting belt.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have replaced Driessen's control bar with a rotatable press roller as taught by the Japanese reference, because the roller would be stronger and have is better at wear resistance than the control bar. When the roller is rotated in the same direction of the casting belt, the sheet material would be conveyed faster.

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7. Claims 7, 9-16, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of Japanese reference (59,133).

Driessen discloses an apparatus and method for casting cheese, comprising a removable discharge manifold (11, 12, col. 2, lines 1-2), wherein the manifold having a hollow interior chamber (Fig. 5) with many inlets (49) for receiving starting material (65), a discharge opening (15, open bottom of chamber 12), an endless casting belt (61, 68, 72) mounted downstream to the manifold wherein cheese sheet is cooled on the belt surface (col. 2, lines 23-26), a thickness control bar (18) is mounted at one side of the chamber (12) for controlling the thickness of the web material, a belt driven mechanism (71, 69) for revolving the belt. The manifold chamber includes a top, bottom, end, upstream and downstream face plates (11, 12), wherein the bottom face open to the casting belt, the downstream face open to the control bar, and the top face having inlets (Fig. 12); each inlets is attached to a corresponding adjustable valve (52), and wherein the control bar (18) is set a fixed distance from the casting belt (61) and a space is formed between a surface of the control bar (18) for determine the thickness of the web material. The sheet material is cooled on the casting belt (61, col. 6, line 30-32). However, Driessen fails to disclose a roller being mounted at the downstream face of the manifold chamber.

The Japanese reference discloses a method and apparatus for forming a dough web material, comprising an endless casting belt (14), a rotatable press roller (7) mounted to the downstream face of the manifold (1) for controlling the thickness of the sheet material, and being driven by a shaft in the same direction as the belt for the purpose of facilitating the material onto the casting belt.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have replaced Driessen's control bar with a rotatable press roller as taught by the Japanese reference, because the roller is stronger and better at wear resistant than the control bar. Further, when the roller is rotated in the same direction of the casting belt, the sheet material would be convey faster.

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8. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of Japanese reference (59,133) as applied to claims 1 and 7 above, and further in view of Collins (4,815,370).

Driessen and the Japanese reference disclose an apparatus and method for forming a dough web as described above. However, these references fail to disclose the roller is made of steel and having a plastic sleeve.

Collins discloses a rice pressing apparatus in which a press roller can be made of steel having a rubber sleeve in order to smooth the web material surface and to be able to change the sleeve as it worn out without replacing the roller.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Driessen and the Japanese reference with a roller made of steel with a plastic sleeve for the purpose of smoothing the web surface and being able to change the sleeve as it worn out without replacing the roller as taught by Collins. It is in the scope of an artisan to recognize that stainless steel is a better choice for making a mold or a press roller.

Response to Arguments

9. Applicant's arguments filed on December 06, 2001 have been fully considered but they are not persuasive.

10. The Applicants allege that the cited references do not utilize a pressurized discharge manifold to discharge pressurized viscous material. The examiner respectfully disagrees. Driessen discloses, "[a] number of functional characteristics are essential for the discharge manifold. It must have a capacity for receiving the hot melted cheese product under pressure and distributing it uniformly along the full length of the manifold" (col. 1, lines 56-60). This statement makes the examiner to believe that Driessen does, indeed, utilize a pressurized discharge manifold. The Japanese reference also discloses a pressurized

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discharge manifold because the screw pump would build up a lot of pressure when transferring material from the hopper to the discharge manifold. Swanson is specially designed to circulate viscous material at high pressure.

11. The Applicants assert that because the Japanese reference is designed for dough rather than a molten, viscous material, it teaches away from Applicant's invention. The examiner respectfully disagrees again. It has been well known in the art that dough and cheese have close properties, that a machine is used for cheese processing is also useable for dough, or vice versa. Swanson discloses a high pressure pump for pumping viscous material, including bread dough, pizza dough, dough slurry, high flour content dough and processed cheese (col. 2, lines 46-51). Fager et al (5,527,551) disclose a method and apparatus for forming a continuous sheet of molten, moldable or plasticized material such as cheese, peanut butter, jellies, and noodles (which is made of dough).

12. The Applicants further argued that by combining the Japanese reference with Driessen would result in the material exiting between two angled surfaces thereby resulting in a less smooth, less uniform exiting material than Applicant's invention. The examiner, however, strongly believes that the smooth and uniform of the sheet material is depended on the smoothness of the contact surface. By replacing a control bar in Driessen with a control roller of the Japanese reference would only increasing the contact surface of the sheet material and the controlling member. If the roller is smooth and evenly formed through out the cross surface, the smoothness and uniform of the sheet material would be ensured.

It has been held that a functional limitation asserted to be critical for establishing novelty may, in fact, be an inherent characteristic of the prior art. The applicants is required to prove that the subject matter shown in the prior art does not necessarily possess the characteristics relied on. In re Schreiber, 128 F. 3d 1473, 1478, 44 USPQ 2d, 1432 (Fed. Cir. 1997); See also, In re Spada, 911 F 2d 705, 708, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1977); In re Best, 562 F. 2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); and Ex Parte Gray, 10 USPQ 2d 1922, 1925 (Bd. Pat. App. & Int. 1989).

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In regarding to the new added claims 17-22, even though the claims are limited to processing cheese sheet, the scope of the claims are not different from the claims 1-16. Therefore, they are duplicated claims. Claims directed to apparatus must be distinguished in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett- Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (Emphasis in original) Further, is has been well known in the art that an apparatus and method for forming cheese would be able to use for other viscous material, and vise versa (Fager et al '551). Thus, by further defining the material used does not further limit the scope of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 703-305-7167. The examiner can normally be reached on Monday-Thursday and on alternate Friday, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 703-308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

TN
March 21, 2002

Tim Heitbrink
TIM HEITBRINK
PRIMARY EXAMINER
GROUP 130

3-21-02